CLAIMS:

1. A method for detection of vascular disease in a subject, comprising the steps of:

(a) introducing into said subject an amount sufficient for later detection of a synthetic oligo-deoxynucleotide (ODN) having an affinity for, and a propensity to accumulate at, a site of vascular disease;

(b) allowing said ODN to circulate within said vascular system, for a time sufficient to allow at least a portion of said ODN to accumulate at said site; and

(c) detecting the accumulated ODN in the vascular system.

2. The method of claim 1, wherein said vascular disease comprises arteriosclerosis.

3. The method of claim 1, wherein said vascular disease is unstable or vulnerable atherosclerotic plaque.

4. The method of claim 1, wherein the ODN is selected from the group consisting of 5'-AGCTG CACTGATTGC CCTTTACCTC CT-3' (ODN-1), 5'-GGGAATG CAATAGATGA AATCT-3' (ODN-2), 5'-CAGTGGG GTACAATTTG TGACG ODN-3' (ODN-3), 5'-TTGGAATAGTGACAGCTCA-3' (ODN-4), 5'-CTGACCAAAGACTTAATGA-3' (ODN-5) and 5'-AACATCACCTTCATTCAAG-3' (ODN-6).

5. The method of claim 1, wherein said ODN contains thirty or fewer nucleotides.

6. The method of claim 1, wherein said ODN bears a detectable label.

7. The method of claim 1, wherein said ODN is selected from a group of candidate ODNs on the basis of at least one performance criterion selected from the group consisting of high sensitivity and selectivity, efficient uptake and temporal stability in fluorescence level for a reasonable period of time.

8. A diagnostic ODN selected from the group consisting of 5'-AGCTG CACTGATTGC CCTTTACCTC CT-3' (ODN-1), 5'-GGGAATG CAATAGATGA AATCT-3' (ODN-2), 5'-CAGTGGG GTACAATTTG TGACG ODN-3' (ODN-3), 5'-TTGGAATAGTGACAGCTCA-3' (ODN-4), 5'-CTGACCAAAGACTTAATGA-3' (ODN-5) and 5'-AACATCACCTTCATTCAAG-3' (ODN-6).

9. The ODN of claim 8, wherein said ODN bears a detectable label.